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NEW PARTNERSHIP TESTS ADVANCED SUPERCOMPUTING SYSTEM

A research project to test one of the most advanced shared-memory computing technologies available will be initiated this fall with installation of a new 512-processor supercomputer by a unique partnership of academic, government, and industry collaborators.

The Major Shared Resource Center (MSRC) within the U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Miss., the Arctic Region Supercomputing Center (ARSC) at the University of Alaska Fairbanks--both Shared Resource Centers in the Department of Defense High Performance Computing Modernization Program (HPCMP)--and SGI today announced they have entered into a collaborative effort to build and evaluate a 512-processor single-system image, using the newest NUMAflex modular technology.

The SGI Origin 3000 series machine, one of the first systems to employ SGI's NUMAflex modular technology, will be installed at the ERDC MSRC providing access to authorized researchers via high-speed networks from anywhere in the nation, including Alaska. The NUMAflex modular system will allow the ERDC MSRC, ARSC, and SGI to cost-effectively build and scale the 512-processor supercomputer using a unique modular architecture that is the industry's only third-generation NUMA system.

"This venture provides a way for the two centers to evaluate one of the newest emerging technologies," said ARSC director Frank Williams. "An opportunity like this sets the stage for wise investment in future hardware. Our involvement in setting up a large SGI Origin 3800 system will help us be smarter in evaluating other computing platforms and will at the same time give our users access to the newest high performance computing architecture."

ARSC initially will contribute ideas, expertise, and research applications for the testing stages. The results of this system evaluation will contribute to determining future

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investment strategies for the ERDC MSRC, ARSC, and the Department of Defense HPCMP.

"The installation of this 512-processor system will give government and academic researchers across the country access to the most advanced NUMA shared-memory computing architecture available today," said Bradley Comes, Director of the ERDC MSRC. "A partnership like this across academia, government, and industry enhances opportunities for information exchange, which can only help the scientists do better research. We look forward to the opportunity to work closely with all of our partners."

"SGI is proud to be partnered with ARSC, ERDC MSRC, and their world-class scientists and engineers to help them analyze and solve the complex problems facing the Department of Defense and the nation as a whole," said Anthony Robbins, President, SGI Federal. "Together we will push the boundaries of high-performance computing while setting the standard for public-private partnerships to come."

Although the system is physically located at the ERDC MSRC, the Arctic Region Supercomputing Center (ARSC) at the University of Alaska in Fairbanks is a partner in the deployment of the new system. As part of this agreement, the ERDC MSRC, ARSC, and SGI will each contribute resources and expertise to the collaboration. The ERDC MSRC has a long-term contractual relationship with Computer Sciences Corporation (CSC) to perform integration services, including installation, integration, and testing of this specialized system configuration. CSC has extensive experience with SGI's existing Origin 2000 technology as a major systems integrator and will continue to provide that expertise for SGI's next-generation of high-end, scalable servers.

ARSC supports high performance computational research by Department of Defense and academic researchers in science and engineering with an emphasis on the high latitudes and the Arctic. The ERDC MSRC serves the high performance computing needs of engineers and scientists throughout the Department of Defense. SGI provides high performance technology solutions in several industries, including manufacturing, government, entertainment, communications, energy, the sciences, and education.

ERDC includes all of the Corps of Engineers dispersed research and development facilities and supports the Army and the nation with high quality research, leading edge

technology, and state-of-the-art facilities. The ERDC organization consists of eight unique laboratories in four locations: Construction Engineering Research Laboratory at Champaign, Ill., Cold Regions Research and Engineering Laboratory at Hanover, N. H., Topographic Engineering Center at Alexandria, Va., and the Coastal and Hydraulics, Structures, Geotechnical, Environmental, and Information Technology Laboratories in Vicksburg, Miss.

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